IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (currently amended) A data converter for use in a network system comprised of a plurality of communication nodes in which data transmitted from a transmitter communication node ~~is~~ are adapted to be received by a set of receiver communication nodes, the data converter comprising:

data reception means for receiving data transmitted from the transmitter communication node to a first receiver communication node, with the transmitted data being formatted in a first format;

information reception means for receiving a communication network parameter associated with the plurality of communication nodes ~~concerning a communication~~ of the network system~~connecting the communication nodes with each other~~;

format conversion means comprising at least one format converter each used for converting ~~a~~ said first format of the transmitted data received by the reception means at least in part to a second format;

route control means for determining a communication route, based on

a format conversion parameter ~~concerning~~ relating to the first format of the transmitted data received by the reception means,

~~a type of~~ format conversion performed by the format conversion means, ~~and~~

~~a type of a~~ format conversion ~~function~~ performed by ~~of~~ another communication node, and/or

~~a~~ the communication network parameter received by the information reception means; and

transmission means for transmitting the transmitted data converted by the format conversion means to ~~another~~ a second receiver communication node, in accordance with the communication route determined by the route control means.

2. (currently amended) The data converter according to claim 1, wherein the route control means determines the communication route, based on information ~~concerning~~ associated with a communication distance between the communication nodes, as the communication network parameter.

3. (currently amended) The data converter according to claim 1, wherein the route control means determines the communication route, based on information ~~concerning~~ associated with a transmission delay between the communication nodes, as the communication network parameter.

4. (currently amended) The data converter according to claim 1, wherein the route control means determines the communication route, based on information ~~concerning~~ associated with a band used between the communication nodes, as the communication network parameter.

5. (currently amended) The data converter according to claim 1, wherein the route control means determines the communication route, based on information ~~concerning~~ associated with a processing delay required for conversion processing at the communication node having the format conversion function, as the format conversion parameter.

6. (currently amended) The data converter according to claim 1, wherein the route control means determines the communication route, based on information ~~concerning~~ associated with an amount of the transmitted data, as the format conversion parameter.

7. (currently amended) The data converter according to claim 1, wherein the route control means determines the communication route, based on information ~~concerning~~ associated with a format of transmitted data which can be transmitted from the transmitter communication node, as the format conversion parameter.

8. (currently amended) The data converter according to claim 1, wherein the route control means determines the communication route, based on information ~~concerning~~ associated with a format of transmitted data which can be received by the receiver communication node, as the format conversion parameter.

9. (currently amended) A data conversion method for use in a network system having a plurality of communication nodes, in which data transmitted from a transmitter communication node ~~is~~ are adapted to be received by a set of receiver communication nodes, the method comprising steps of:

receiving ~~previously~~ initially a communication network parameter ~~concerning~~ associated with ~~a~~ the ~~communication~~ network system ~~which connects~~ connecting the communication nodes ~~with each other~~;

converting a first format of the transmitted data ~~when the transmitted data~~ received from the transmitter communication node at least in part to a second format ~~is received~~;

determining a communication route, based on

a format conversion parameter ~~concerning~~ associated with the first ~~a~~ format of the transmitted data,

~~a type of the~~ format conversion type, ~~and~~

~~a type of~~ the format conversion ~~function of~~ performed by another communication node, and/or

the communication network parameter, when converting the format of the transmitted data; and

transmitting the converted transmitted data to ~~the another~~ a second communication node, in accordance with the communication route.

10. (currently amended) The data conversion method according to claim 9, wherein the communication route is determined, based on information ~~concerning~~ associated with a communication distance between the communication nodes, as the communication network parameter.

11. (currently amended) The data conversion method according to claim 9, wherein the communication route is determined, based on information ~~concerning~~ associated

with a transmission delay between the communication nodes, as the communication network parameter.

12. (currently amended) The data conversion method according to claim 9, wherein the communication route is determined, based on information ~~concerning~~ associated with a band used between the communication nodes, as the communication network parameter.

13. (currently amended) The data conversion method according to claim 9, wherein the communication route is determined, based on information ~~concerning~~ associated with a processing delay required for conversion processing at the communication node having the format conversion function, as the format conversion parameter.

14. (currently amended) The data conversion method according to claim 9, wherein the communication route is determined, based on information ~~concerning~~ associated with a data amount of the transmitted data, as the format conversion parameter.

15. (currently amended) The data conversion method according to claim 9, wherein the communication route is determined, based on information ~~concerning~~ associated with a format of transmitted data which can be transmitted from the transmitter communication node, as the format conversion parameter.

16. (currently amended) The data conversion method according to claim 9, wherein the communication route is determined, based on information ~~concerning~~ associated

with a format of transmitted data which can be received by the receiver communication node, as the format conversion parameter.

17. (currently amended) A data transmission/reception apparatus, for use in a network system ~~comprised of~~ comprising a plurality of communication nodes, for relaying data transmitted from ~~the~~ a first communication node and transmitting ~~the~~ relayed data to ~~another~~ a second communication node, the data transmission/reception apparatus comprising:

data reception means for receiving data transmitted from ~~another~~ the first communication node;

route control means for determining a communication route, based on

a format of the ~~transmitted~~ data received by the reception means, and/or

a format conversion parameter ~~concerning~~ associated with a type of format conversion of another communication node; and

transmission means for transmitting the ~~transmitted~~ data received by the reception means to ~~another~~ a third communication node based upon the format of the received data, and [[,]] in accordance with the communication route determined by the route control means.

18. (currently amended) The data transmission/reception apparatus according to claim 17, wherein

the route control means determines the communication route, based on information ~~concerning~~ associated with a communication distance, as a communication network parameter.

19. (currently amended) The data transmission/reception apparatus according to claim 17, wherein

the route control means determines the communication route, based on information ~~concerning~~ associated with a transmission delay between the communication nodes, as a communication network parameter.

20. (currently amended) The data transmission/reception apparatus according to claim 17, wherein

the route control means determines the communication route, based on information ~~concerning~~ associated with a band used between the communication nodes, as a communication network parameter.

21. (currently amended) The data transmission/reception apparatus according to claim 17, wherein

the route control means determines the communication route, based on information ~~concerning~~ associated with a processing delay required for conversion processing at the communication node having the format conversion function, as the format conversion parameter.

22. (currently amended) The data transmission/reception apparatus according to claim 17, wherein

the route control means determines the communication route, based on information ~~concerning~~ associated with a data amount of the transmitted data, as the format conversion parameter.

23. (currently amended) A data transmission/reception method in a network system comprised of a plurality of communication nodes for relaying data from a first communication node and transmitting ~~the transmitted~~ data to ~~another~~ a second communication node ~~in a network system comprised of a plurality of communication nodes~~, the method comprising the steps of:

receiving transmitted data from the first communication node;

determining a communication route, based on

a format of the ~~received transmitted~~ data received from the first communication node, and/or

a format conversion parameter ~~concerning~~ associated with a format conversion ~~function of the~~ performed by another communication node; and

transmitting the received ~~transmitted~~ data to ~~the another~~ a third communication node based upon the format of the received data, and in accordance with the determined communication route.

24. (currently amended) The data transmission/reception method according to claim 23, wherein

the communication route is determined, based on information ~~concerning~~ associated with a communication distance, as a communication network parameter.

25. (currently amended) The data transmission/reception method according to claim 23, wherein

the communication route is determined, based on information ~~concerning~~ associated with a transmission delay between the communication nodes, as a communication network parameter.

26. (currently amended) The data transmission/reception method according to claim 23, wherein

the communication route is determined, based on information ~~concerning~~ associated with a band used between the communication nodes, as a communication network parameter.

27. (currently amended) The data transmission/reception method according to claim 23, wherein

the communication route is determined, based on information ~~concerning~~ associated with a processing delay required for conversion processing at the communication node having the format conversion function, as the format conversion parameter.

28. (currently amended) The data transmission/reception method according to claim 23, wherein

the communication route is determined, based on information ~~concerning~~ associated with a data amount of the transmitted data, as the format conversion parameter.

29. (currently amended) A network system including a plurality of communication nodes, wherein data transmitted from a transmitter communication node ~~is~~ are adapted to be received by a set of receiver communication nodes, comprising:

information obtaining means for obtaining a communication network parameter ~~concerning~~ associated with a communication network connecting the communication nodes ~~with each other~~;

format conversion means comprising at least one format converter for converting a first format of the transmitted data ~~transmitted~~ from the transmitter communication node at least in part to a second format; and

route control means for determining a communication route, based on

a format conversion parameter ~~concerning~~ relating to the first format of the transmitted data transmitted from the transmitter communication node and

~~a type of~~ format conversion performed by the format conversion means, and/or

the communication network parameter obtained by the information obtaining means.

30. (currently amended) The network system according to claim 29, wherein the route control means determines the communication route, based on information ~~concerning~~

associated with a communication distance between the communication nodes, as the communication network parameter.

31. (currently amended) The network system according to claim 29, wherein the route control means determines the communication route, based on information ~~concerning~~ associated with a transmission delay between the communication nodes, as the communication network parameter.

32. (currently amended) The network system according to claim 29, wherein the route control means determines the communication route, based on information ~~concerning~~ associated with a band used between the communication nodes, as the communication network parameter.

33. (currently amended) The network system according to claim 29, wherein the route control means determines the communication route, based on information ~~concerning~~ associated with a processing delay required for conversion processing at the communication node having the format conversion function, as the format conversion parameter.

34. (currently amended) The network system according to claim 29, wherein the route control means determines the communication route, based on information ~~concerning~~ associated with a data amount of the transmitted data, as the format conversion parameter.

35. (currently amended) The network system according to claim 29, wherein

the route control means determines the communication route, based on information ~~concerning~~ associated with a format of transmitted data which can be transmitted from the transmitter communication node, as the format conversion parameter.

36. (currently amended) The network system according to claim 29, wherein

the route control means determines the communication route, based on information ~~concerning~~ associated with a format of transmitted data which can be received by the receiver communication node, as the format conversion parameter.

37. (original) The network system according to claim 29, comprising the plurality of communication nodes having the format conversion means, wherein

different types of format conversion processing are carried out by each of the format conversion means.

38. (currently amended) The network system according to claim 29, comprising the plurality of communication nodes having the format conversion means, ~~and~~ wherein

a ~~predetermined~~ first ~~quantity~~ number of format conversion means are provided for format conversion ~~used~~ with a high use frequency ~~are provided~~ while a second number of format conversion means are provided for format conversion with a low use ~~smaller quantity of the format conversion means for format conversion used with a low~~ frequency, the second number is smaller than the first number ~~are provided than the predetermined quantity, based on use frequencies of types of format conversion~~.

39. (original) The network system according to claim 29, wherein

if the transmitter communication node or the receiver communication node can transmit/receive transmitting/transmitted data in a plurality of formats, the route control means obtains a communication route for every type of format, and controls the transmitter communication node or the receiver communication node so as to transmit/receive the transmitting/transmitted data in any of the plurality of formats.